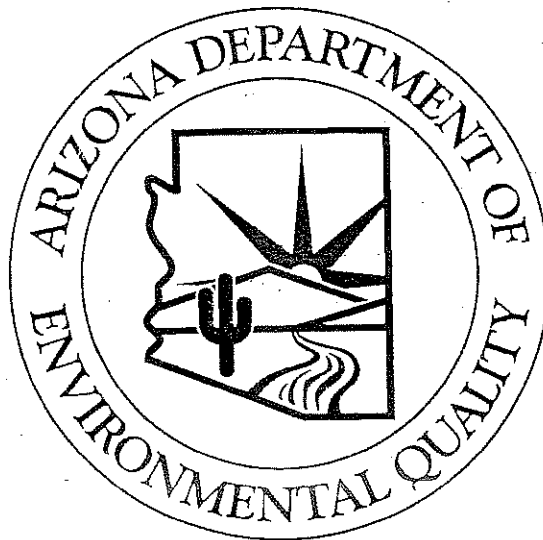


ASBESTOS NESHAP REGULATIONS FOR RENOVATION AND DEMOLITION ACTIVITIES

As Per; Title 40, Code of Federal Regulations, Part 61, Subpart M,
National Emission Standard for Asbestos
As per Clean Air Act Amendments of November 20, 1990 including Appendix A



Arizona Department of Environmental Quality
Air Quality Compliance Section

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*Updated 07/30/2002; Arizona DEQ/AQD Asbestos NESHAP Program
This Reference Guide is provided for convenience and guidance only from ADEQ.*

This Reference Guide **does not include the following Standards** under Title 40 CFR, Part 61, Subpart M, National Emission Standard for Asbestos:

Sections

- 61.142 Standard for asbestos mills
- 61.143 Standard for roadways
- 61.144 Standard for manufacturing
- 61.146 Standard for spraying
- 61.147 Standard for fabricating
- 61.148 Standard for insulating materials
- 61.149 Standard for waste disposal for asbestos mills
- 61.152 Air - Cleaning
- 61.155 Standard for operations that convert asbestos-containing waste material into nonasbestos (asbestos-free) material.

ASBESTOS NESHAP REGULATIONS

Title 40, Code of Federal Regulations, Part 61, Subpart M, Asbestos NESHAP
As per Clean Air Act Amendments of November 20, 1990 including Appendix A

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SECTION 61.141

DEFINITIONS

Active waste disposal site means any disposal site other than an inactive site.

Adequately wet means sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Asbestos means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

Asbestos-containing waste materials means mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this subpart. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material, waste and materials contaminated with asbestos including disposable equipment and clothing.

Asbestos waste from control devices means any waste material that contains asbestos and is collected by a pollution control device.

Category I (CAT I) nonfriable asbestos-containing material (ACM) means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II (CAT II) nonfriable ACM means any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Cutting means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

Emergency renovation operation means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by nonroutine failures of equipment.

SECTION 61.141 - Continued

Fabricating means any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites (field fabricating) for the construction or restoration of facilities. In the case of friction products, fabricating includes bonding, debonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.

Facility means any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation or building that was previously subject to this subpart is not excluded, regardless of its current use or function.

Facility component means any part of a facility including equipment.

Friable asbestos material means any material containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763 section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Fugitive source means any source of emissions not controlled by an air pollution control device.

Glove bag means a sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove bags provide a small work area enclosure typically used for small-scale asbestos stripping operations. Information on glove-bag installation, equipment and supplies, and work practices is contained in the Occupational Safety and Health Administration's (OSHA's) final rule on occupational exposure to asbestos (appendix G to 29 CFR 1926.58).

Grinding means to reduce to powder or small fragments and includes mechanical chipping or drilling.

In poor condition means the binding of the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

Inactive waste disposal site means any disposal site or portion of it where additional asbestos-containing waste material has not been deposited within the past year.

SECTION 61.141 - Continued

Installation means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

Leak-tight means that solids or liquids cannot escape or spill out. It also means dust-tight.

Malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.

Manufacturing means the combining of commercial asbestos--or, in the case of woven friction products, the combining of textiles containing commercial asbestos--with any other material(s), including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

Nonfriable asbestos-containing material means any material containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Nonscheduled renovation operation means a renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience, but for which an exact date cannot be predicted:

Outside air means the air outside buildings and structures, including, but not limited to, the air under a bridge or in an open air ferry dock.

Owner or operator of a demolition or renovation activity means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

Particulate asbestos material means finely divided particles of asbestos or material containing asbestos.

Planned renovation operations means a renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

SECTION 61.141 - Continued

Regulated asbestos-containing material (RACM) means (a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Remove means to take out RACM or facility components that contain or are covered with RACM from any facility.

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

Resilient floor covering means asbestos-containing floor tile, including asphalt and vinyl floor tile, and sheet vinyl floor covering containing more than 1 percent asbestos as determined using polarized light microscopy according to the method specified in appendix A, subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy.

Roadways means surfaces on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.

Strip means to take off RACM from any part of a facility or facility components.

Structural member means any load-supporting member of a facility, such as beams and load supporting walls; or any nonload-supporting member, such as ceilings and nonload-supporting walls.

Visible emissions means any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Waste generator means any owner or operator of a source covered by this subpart whose act or process produces asbestos-containing waste material.

Waste shipment record means the shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Working day means Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

TITLE 40, CODE OF FEDERAL REGULATIONS, PART 61
SUBPART M; NATIONAL EMISSION STANDARD FOR ASBESTOS
DEMOLITION OR RENOVATION ACTIVITIES

SECTION 61.145(a)

APPLICABILITY

To determine which requirements of paragraphs (a), (b), and (c) of this section apply to the owner or operator of a demolition or renovation activity and **prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility or part of the facility** where the demolition or renovation operation will occur **for the presence of asbestos**, including Category I and Category II nonfriable ACM. The requirements of paragraphs (b) and (c) of this section apply to each owner or operator of a demolition or renovation activity, including the removal of RACM as follows:

- (1) In a **facility being demolished**, all the requirements of paragraphs (b) and (c) of this section apply, except as provided in paragraph (a)(3) of this section, if the **combined amount of RACM** is:
 - (i) **At least 260 linear feet on pipes or at least 160 square feet on other facility components**,
or;
 - (ii) **At least 35 cubic feet off facility components** where the length or area could not be measured previously.
- (2) In a **facility being demolished**, only the notification requirements of paragraphs (b)(1), (2), (3)(i) and (iv), and (4)(i) through (vii) and (4)(ix) and (xvi) of this section apply, if the **combined amount of RACM** is:
 - (i) **Less than 260 linear feet on pipes and less than 160 square feet on other facility components**, and;
 - (ii) **Less than 35 cubic feet off facility components** where the length or area could not be measured previously **or there is no asbestos**.
- (3) If the **facility is being demolished under an order of a State or local government agency**, issued because **the facility is structurally unsound and in danger of imminent collapse**, only the requirements of paragraphs (b)(1), (b)(2), (b)(3)(iii), (b)(4) [except (b)(4)(viii)], (b)(5), and (c)(4) through (c)(9) of this section apply.

SECTION 61.145(a) - Continued

- (4) In a facility being renovated, including any individual nonscheduled renovation operation, all the requirements of paragraphs (b) and (c) of this section apply if the **combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed** is:
- (i) At least 260 linear feet on pipes or at least 160 square feet on other facility components,
or;
 - (ii) At least 35 cubic feet off facility components where the length or area could not be measured previously.
 - (iii) To determine whether paragraph (a)(4) of this section applies to planned renovation operations involving individual nonscheduled operations, **predict** the combined additive amount of RACM to be **removed or stripped** during a calendar year of **January 1 through December 31**;
 - (iv) To determine whether paragraph (a)(4) of this section applies to **emergency renovation operations**, **estimate** the combined amount of RACM to be **removed or stripped** as a result of the **sudden, unexpected event** that necessitated the renovation.
- (5) Owners or operators of demolition and renovation operations are exempt from the requirements of Sections 61.05(a), 61.07, and 61.09.

SECTION 61.145(b)

NOTIFICATION REQUIREMENTS

Each owner or operator of a demolition or renovation activity to which this section applies shall:

- (1) Provide the Administrator with **written notice** of intention to **demolish or renovate**. Delivery of the notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable.
- (2) **Update notice, as necessary, including** when the amount of asbestos affected changes by at least 20 percent.
- (3) **Postmark or deliver the notice as follows:**
 - (i) At least 10 working days before asbestos stripping or removal work or any other activity begins (such as **site preparation** that would **break up, dislodge** or similarly **disturb asbestos material**), if the operation is described in paragraphs (a)(1) and (a)(4) [except (a)(4)(iii) and (a)(4)(iv)] of this section. If the operation is as described in paragraph (a)(2) of this section, notification is required 10 working days before demolition begins.
 - (ii) At least 10 working days before the end of the calendar year preceding the year for which notice is being given for **renovations** described in paragraph (a)(4)(iii) of this section.
 - (iii) As early as possible before, but not later than, the following working day if the operation is an **ordered demolition** according to paragraph (a)(3) of this section or, if the operation is an **emergency renovation** described in paragraph (a)(4)(iv) of this section.
 - (iv) For asbestos stripping or removal work in a demolition or renovation operation, described in paragraphs (a)(1) and (a)(4) [except (a)(4)(iii) and (a)(4)(iv)] of this section, and for a **demolition** described in paragraph (a)(2) of this section, that will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator as follows:
 - (A) When the **asbestos stripping or removal operation or demolition operation** covered by this paragraph will begin after the date contained in the notice,
 - (1) Notify the Administrator of the **new start date** by telephone as soon as possible **before the original start date, and;**
 - (2) Provide the Administrator with a **written notice** of the **new start date** as soon as possible **before, and no later than, the original start date**. Delivery of the updated notice by the U.S. Postal Service, commercial delivery service, or hand delivery is acceptable.

SECTION 61.145(b) - Continued

(B) When the asbestos stripping or removal operation or demolition operation covered by this paragraph will begin on a date **earlier** than the **original start date**,

(1) Provide the Administrator with a **written notice** of the **new start date** at least **10 working days** before asbestos stripping or removal work begins.

(2) For **demolitions** covered by paragraph (a)(2) of this section, provide the Administrator written notice of a **new start date** at least 10 working days **before commencement of demolition**. Delivery of updated notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable.

(C) **In no event** shall an operation covered by this paragraph **begin on a date other than** the date contained in the written notice of the new start date

(4) Include the following in the notice:

(i) An indication of whether the notice is the **original** or a **revised** notification.

(ii) Name, address, and telephone number of both the **facility owner and operator** and the **asbestos removal contractor, owner or operator**.

(iii) Type of operation: demolition or renovation.

N - **NESHAP Renovation** described in (a)(1); R - **ACM Removal** described in (a)(2);
E - **Emergency Renovation** described in (a)(4)(iv); D - **Demolition with ACM removal**
described in (a)(1) or (a)(2) or **demolition without asbestos** described in (a)(2); or
O - **Ordered Demolition** as described in (a)(3).

(iv) **Description of the facility or affected part of the facility** including the size (square feet), number of floors, age, and **present and prior use** of the facility.

Present and prior use codes are: C - Commercial; H - Hospital; S - School;
P - Public Building; R - Residence; O - Office; I - Industrial; B - Ship/Boat;
U - University/College; and M - Miscellaneous.

(v) **Procedure**, including **analytical methods**, employed to detect **the presence** of RACM and Category I and Category II nonfriable ACM.

PLM-Polarized Light Microscopy; EPA Reference Method 600/M4-82-020. Also as referenced in Appendix A, Subpart F, Title 40, Code of Federal Regulations, Part 763, Section 1, Polarized Light Microscopy.

SECTION 61.145(b) - Continued

- (vi) Estimate of the approximate amount of **RACM to be removed** from the facility in terms of length of pipe in linear feet, surface area in square feet on other facility components, or volume in cubic feet if off the facility components. Also, estimate the approximate amount of **Category I and Category II nonfriable ACM** in the affected part of the facility that will not be removed before demolition.
- (vii) **Location and street address** (including building number or name and floor or room number, if appropriate), **city, county, and state**, of the facility being demolished or renovated.
- (viii) **Scheduled starting and completion dates of asbestos removal work** (or any other activity, such as site preparation that would **break up, dislodge, or similarly disturb asbestos material**) in a **demolition or renovation**; planned renovation operations involving individual nonscheduled operations shall only include the beginning and ending dates of the report period as described in paragraph **(a)(4)(iii)** of this section.
- (ix) Scheduled starting and completion dates of demolition or renovation.
- (x) **Description** of planned demolition or renovation work to be performed and **method(s) to be employed**, including demolition or renovation **techniques to be used** and description of affected facility components.
- (xi) **Description of work practices and engineering controls** to be used to comply with the requirements of this subpart, including asbestos removal and waste-handling emission control **procedures**.
- (xii) **Name and location** of the **waste disposal site** where the asbestos-containing waste material will be deposited.
- (xiii) A **certification** that **at least one person trained** as required by paragraph (c)(8) of this section will supervise the stripping and removal described by this notification.
- (xiv) For facilities described in paragraph (a)(3) of this section, the **name, title, and authority** of the State or local government representative who has ordered the demolition, the **date that the order was issued**, and the **date on which the demolition was ordered to begin**. A copy of the order shall be attached to the notification.
- (xv) For **emergency renovations** described in paragraph **(a)(4)(iv)** of this section, the **date and hour that the emergency occurred**, a description of the sudden, unexpected event, and an explanation of how the event caused an unsafe **condition**, or would cause equipment damage or an **unreasonable financial burden**.

SECTION 61.145(b) - Continued

- (xvi) Description of **procedures to be followed** in the event that **unexpected RACM** is found or **Category II** nonfriable ACM becomes crumbled, pulverized, or reduced to powder.
- (xvii) **Name, address, and telephone number** of the waste transporter.
- (5) The information required in paragraph (b)(4) of this section must be reported using a form similar to that shown in Figure 3. (SEE NOTE BELOW)

NOTE

The Arizona Department of Environmental Quality maintains the **NESHAP notification forms for the State of Arizona**. Specific notification forms are available with county/city building department contacts which include mailing addresses and telephone numbers.

To obtain a current copy of the NESHAP Notification form for the county where the renovation or demolition is to take place, contact:

Arizona Department of Environmental Quality
Attn: Tracy Neal, Asbestos NESHAP Coordinator
1110 West Washington Street
Phoenix, Arizona 85007
Telephone: (602) 771-2333 or (602) 771-4553
Fax: (602) 771-2299
Toll Free in-State: (800) 234-5677 x2333 or x4553

Notifications forms can be obtained on our website at:
www.adeq.state.az.us/enviro/air/complain/asbestos

SECTION 61.145(c)

PROCEDURES FOR ASBESTOS EMISSION CONTROL

Each owner or operator of a demolition or renovation activity to whom this paragraph applies, according to paragraph (a) of this section, shall comply with the following procedures:

- (1) Remove all RACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. RACM need not be removed before demolition if:
 - (i) It is **Category I nonfriable ACM** that is **not in poor condition** and is **not friable**.
 - (ii) It is on a facility component that is **encased in concrete** or other similarly hard material and is **adequately wet** whenever exposed during demolition; or
 - (iii) It was **not accessible for testing** and was, therefore, **not discovered until after demolition began** and, as a result of the demolition, the material **cannot be safely removed**. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and adequately wet at all times until disposed of.
 - (iv) They are **Category II nonfriable ACM** and the **probability is low** that the materials will become **crumbled, pulverized, or reduced to powder** during demolition.
- (2) When a facility component that contains, is covered with, or is coated with RACM is being taken out of the facility as a unit or in sections:
 - (i) Adequately wet all RACM exposed during cutting or disjoining operations; and
 - (ii) Carefully lower each unit or section to the floor and to ground level, **not dropping, throwing, sliding, or otherwise damaging or disturbing the RACM**.
- (3) When RACM is stripped from a facility component while it remains in place in the facility, adequately wet the RACM during the stripping operation.
 - (i) In renovation operations, wetting is **not required** if:
 - (A) The owner or operator **has obtained prior written approval from the Administrator** based on a **written application** that wetting to comply with this paragraph would **unavoidably damage equipment or present a safety hazard**; and

SECTION 61.145(c) - Continued

(B) The owner or operator uses of the following **emission control methods**:

- (1) A **local exhaust ventilation and collection system** designed and operated to capture the particulate asbestos material produced by the stripping and removal of the asbestos materials. The system must exhibit **no visible emissions to the outside air** or be designed and operated in accordance with the requirements in Section 61.152.
 - (2) A **glove-bag system** designed and operated to contain the particulate asbestos material produced by the stripping of the asbestos materials.
 - (3) **Leak-tight wrapping** to contain all RACM prior to dismantlement.
- (ii) In renovation operations where **wetting would result in equipment damage** or a **safety hazard**, and the methods allowed in paragraph (c)(3)(i) of this section **cannot be used**, another method may be used after obtaining **written approval from the Administrator** based upon a determination that it is equivalent to wetting in controlling emissions or to the methods allowed in paragraph (c)(3)(i) of this section.
- (iii) A **copy of the Administrator's written approval** shall be kept at the **worksite** and **made available for inspection**.
- (4) After a facility component covered with, coated with, or containing **RACM** has been **taken out of the facility as a unit** or **in sections** pursuant to paragraph (c)(2) of this section, it **shall be stripped or contained in leak-tight wrapping**, except as described in paragraph (c)(5) of this section. If stripped, either:
- (i) **Adequately wet** the RACM during stripping; or
 - (ii) Use a **local exhaust ventilation and collection system** designed and operated to capture the particulate asbestos material produced by the stripping. The system must exhibit **no visible emissions to the outside air** or be designed and operated in accordance with the requirements in Section 61.152.
- (5) For **large facility components** such as reactor vessels, large tanks, and steam generators, but **not beams** (which must be handled in accordance with paragraphs (c)(2), (3), and (4) of this section), the RACM is **not required** to be stripped if the following requirements are met:
- (i) The component is removed, transported, stored, disposed of, or reused **without disturbing or damaging** the RACM.
 - (ii) The component is **encased in a leak-tight wrapping**.

SECTION 61.145(c) - Continued

(iii) The **leak-tight wrapping** is **labeled** according to Section 61.149(d)(1)(i), (ii), and (iii) during all loading and **unloading operations** and **during storage**.

(6) **For all RACM**, including material that has been removed or stripped:

(i) **Adequately wet** the material and **ensure that it remains wet** until collected and contained or treated in preparation for disposal in accordance with Section 61.150; and

(ii) **Carefully lower the material to the ground and floor**, not dropping, throwing, sliding, or otherwise damaging or disturbing the material.

(iii) **Transport** the material to the ground via **leak-tight chutes or containers** if it has been removed or stripped **more than 50 feet above ground level** and was not removed as units or in sections.

(iv) RACM contained in leak-tight wrapping that has been removed in accordance with paragraphs (c)(4) and (c)(3)(i)(B)(3) of this section need not be wetted.

(7) When the temperature at the point of wetting is **below 0°C (32°F)**:

(i) The owner or operator need not comply with paragraph (c)(2)(i) and the wetting provisions of paragraph (c)(3) of this section.

(ii) The owner or operator shall remove facility components containing, coated with, or covered with RACM **as units or in sections** to the **maximum extent possible**.

(iii) During periods when **wetting operations are suspended due to freezing temperatures**, the owner or operator must record the temperature in the area containing the facility components at the **beginning, middle, and end** of each workday and keep daily **temperature records** available for inspection by the Administrator during normal business hours **at the demolition or renovation site**. The owner or operator shall retain the temperature records for at least **2 years**.

SECTION 61.145(c) - Continued

(8) Effective 1 year after promulgation of this regulation, no RACM shall be stripped, removed, or otherwise handled or disturbed at a facility regulated by this section unless at least one on-site representative, such as a foreman or management-level person or other authorized representative, trained in the provisions of this regulation and the means of complying with them, is present. Every 2 years, the trained on-site individual shall receive refresher training in the provisions of this regulation. The required training shall include as a minimum: applicability; notifications; material identification; control procedures for removals including, at least, wetting, local exhaust ventilation, negative pressure enclosures, glove-bag procedures, and High Efficiency Particulate Air (HEPA) filters; waste disposal work practices; reporting and record-keeping; and asbestos hazards and worker protection. Evidence that the required training has been completed shall be posted and made available for inspection by the Administrator at the demolition or renovation site.

(9) For facilities described in paragraph (a)(3) of this section, adequately wet the portion of the facility that contains RACM during the wrecking operation.

(10) If a facility is demolished by intentional burning, all RACM including Category I and Category II nonfriable ACM must be removed in accordance with the NESHAP before burning.

SECTION 61.150

STANDARDS FOR WASTE DISPOSAL FOR MANUFACTURING, FABRICATING, DEMOLITION, RENOVATION, AND SPRAYING OPERATIONS

Each owner or operator of any source covered under the provisions of Section 61.145 shall comply with the following provisions:

SECTION 61.150(a)

Discharge no visible emissions to the outside air during the collection, processing (including incineration), packaging, or transporting of any asbestos-containing waste material generated by the source, or use one of the emission control and waste treatment methods specified in paragraphs (a)(1) through (4) of this section.

(1) Adequately wet asbestos-containing waste material as follows:

- (i) Mix control device asbestos waste to form a slurry; **adequately wet other asbestos-containing waste material; and**
- (ii) **Discharge no visible emissions to the outside air from collection, mixing, wetting, and handling operations,** or use the methods specified by Section 61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air; and
- (iii) After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; or, for materials that will not fit into containers without additional breaking, put materials into leak-tight wrapping; and
- (iv) Label the containers or wrapped materials specified in paragraph (a)(1)(iii) of this section using warning labels specified by Occupational Safety and Health Standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1926.1101(k)(8)(iii) and 29 CFR 1910.1200(f). The labels shall be printed in letters of sufficient size and contrast so as to be readily visible and legible.
- (v) For asbestos-containing waste material to be transported off the facility site, label containers or wrapped materials with the name of the waste generator and the location at which the waste was generated.

(2) Process asbestos-containing waste material into nonfriable forms as follows:

SECTION 61.150(a) - Continued

- (i) Form all asbestos-containing waste material into nonfriable pellets or other shapes;
 - (ii) Discharge no visible emissions to the outside air from collection and processing operations, including incineration, or use the method specified by Section 61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.
- (3) For facilities demolished where the RACM is not removed prior to demolition according to Sections 61.145(c)(1)(i), (ii), (iii), and (iv) or for facilities demolished according to Section 61.145(c)(9), adequately wet asbestos-containing waste material at all times after demolition and keep wet during handling and loading for transport to a disposal site. Asbestos-containing waste materials covered by this paragraph do not have to be sealed in leak-tight containers or wrapping but may be transported and disposed of in bulk.
- (4) Use an alternative emission control and waste treatment method that has received prior approval by the Administrator according to the procedure described in Section 61.149(c)(2).
- (5) As applied to demolition and renovation, the requirements of paragraph (a) of this section do not apply to Category I nonfriable ACM waste and Category II nonfriable ACM waste that did not become crumbled, pulverized, or reduced to powder.

SECTION 61.150(b)

All asbestos-containing waste material shall be deposited as soon as is practical by the waste generator at:

- (1) A waste disposal site operated in accordance with the provisions of Section 61.154, or
 - (2) An EPA-approved site that converts RACM and asbestos-containing waste material into nonasbestos (asbestos-free) material according to the provisions of Section 61.155.
- (3) The requirements of paragraph (b) of this section do not apply to Category I nonfriable ACM that is not RACM.

SECTIONS 61.150(c) - Continued

Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of waste so that the signs are visible. The markings must conform to the requirements of Sections 61.149(d)(1)(i), (ii), and (iii).

REFERENCE SECTION 61.149(d)

When waste is transported by vehicle to a disposal site:

- (1) Mark vehicles used to transport asbestos-containing waste material **during the loading and unloading** of the waste so that the **signs are visible**. The markings must:
 - (i) Be displayed in such a manner and location that a person can easily read the legend.
 - (ii) Conform to the requirements for 51 cm X 36 cm (20 inches X 14 inches) upright format signs specified in 29 CFR 1926.1101(k)(7)(ii)(A) and this paragraph; and
 - (iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY

Notation

2.5 cm (1 inch) Sans Serif, Gothic or Block
2.5 cm (1 inch) Sans Serif, Gothic or Block
1.9 cm (3/4 inch) Sans Serif, Gothic or Block
14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

SECTION 61.150(d)

For all asbestos-containing waste material **transported off** the facility site:

(1) **Maintain waste shipment records**, using a form similar to that shown in 61.150(d), and include the following information:

- (i) **The name, address, and telephone number of the waste generator.**
- (ii) **The name and address of the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program.**
- (iii) **The approximate quantity in cubic meters (cubic yards).**
- (iv) **The name and telephone number of the disposal site operator.**
- (v) **The name and physical site location of the disposal site.**
- (vi) **The date transported.**
- (vii) **The name, address, and telephone number of the transporter(s).**
- (viii) **A certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.**

NOTE: Shipping name for friable waste asbestos is: **RQ, Waste, Asbestos, 9, NA2212, III.**

- (2) **Provide a copy of the waste shipment record**, described in paragraph (d)(1) of this section, to the disposal site owners or operators at the same time as the asbestos-containing waste material is delivered to the disposal site.
- (3) For waste shipments where a **copy of the waste shipment record**, signed by the owner or operator of the designated disposal site, **is not received by the waste generator within 35 days of the date the waste was accepted by the initial transporter**, contact the transporter and/or the owner or operator of the designated disposal site to determine the status of the waste shipment.
- (4) **Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program** for the waste generator if a copy of the waste shipment record, signed by the owner or operator of the designated waste disposal site, **is not received by the waste generator within 45 days of the date the waste was accepted by the initial transporter**. Include in the report the following information:

- (i) A copy of the waste shipment record for which a confirmation of delivery was not received, and
 - (ii) A cover letter signed by the waste generator explaining the efforts taken to locate the asbestos waste shipment and the results of those efforts.
- (5) Retain a copy of all waste shipment records, including a copy of the waste shipment record signed by the owner or operator of the designated waste disposal site, for at least 2 years.

SECTION 61.150(e)

Furnish upon request, and make available for inspection by the Administrator, all records required under this section.

Figure 4. Waste Shipment Record

(SEE PAGE 22 - EXAMPLE FOR STATE OF ARIZONA)

Review in 40 CFR 61, Part 61, Subpart M, Section 61.149

FIGURE 4. WASTE SHIPMENT RECORD

EXAMPLE: STATE OF ARIZONA



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION - COMPLIANCE SECTION

1110 West Washington Street - 3rd Floor Phoenix, Arizona 85007**ASBESTOS NESHAP WASTE SHIPMENT RECORD**

GENERATOR	1a. Work Site Name, Address & County		1b. Owner's Name and Mailing Address	
			Owner's Telephone No. ()	
	2. Operator's Name & Mailing Address		3. Waste Disposal Site (WDS) Name, Address and Physical Location	
	Operator's Telephone No. ()		WDS Telephone No. ()	
TRANSPORTER	4a. Asbestos NESHAP Regulatory Agency Name & Address for Work Site		4b. Asbestos NESHAP Regulatory Agency for WDS: Name & Address	
	5. Description of Materials	6. Containers: Number	Containers: Type	7. Total Quantity Removed in m ³ (yd ³)
	Friable Asbestos Material			
	Nonfriable Asbestos Material			
	8a. Special Transportation, Treatment, Storage or Disposal Information			
	8b. Bill of Lading Information			
	8c. Alternate Waste Disposal Site Information			
	8d. Emergency Response Telephone No.			
	9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.			
DISPOSAL SITE	NOTE: The waste generator/operator must retain a copy of this form.		MO DAY YR	
	Printed/Typed Name & Title		Signature	
	10a. Transporter's (Acknowledgement of Receipt of Materials)		MO DAY YR	
	Printed/Typed Name, Title, Address & Telephone No.		Signature	
DISPOSAL SITE	10b. Transporter's (Acknowledgement of Receipt of Materials)		MO DAY YR	
	Printed/Typed Name, Title, Address & Telephone No.		Signature	
	12. Discrepancy Indication Space			
	13. Waste Disposal Site Owner's Operator Certificate for Asbestos Materials covered by this manifest (See page 2 for details)		MO DAY YR	
Printed/Typed Name & Title		Signature		

WDS: RETURN COMPLETED COPY TO OPERATOR (ITEM 2) WITHIN 30 DAYS

FIGURE 4. WASTE SHIPMENT RECORD INSTRUCTIONS

Waste Generator Section (Items 1-9)

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number.
2. If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3. Enter the name, address, and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on-site" if the waste will be disposed of on the generator's property.
4. Provide the name and address of the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program.
5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of friable and nonfriable asbestos material.

For friable asbestos, enter: **RQ, Waste, Asbestos, 9, NA2212, PG III**

6. Enter the number of containers used to transport the asbestos materials listed in Item 5. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):

DM - Metal drums, barrels

DP - Plastic drums, barrels

BA - 6 mil plastic bags or wrapping

7. Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8. Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.

8a) If friable ACM (<440 lbs) shipped by **cargo aircraft** or passenger-carrying rail cars;

8b) North American Emergency Response Guide 171 or **NAERG 171**;

8c) Name of alternate asbestos waste landfill or "**Return to Generator**";

8d) (800) 234-5677 Arizona **DEQ Emergency Response** or Generator's 24 hour number

FIGURE 4. WASTE SHIPMENT RECORD INSTRUCTIONS - Continued

Transporter Section (Items 10 & 11)

9. The authorized agent of the waste generator must read and then sign and date this certification. The date is the date of receipt by transporter. **NOTE: The waste generator must retain a copy of this form.**
10. & 11. Enter name, address, and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport. Enter date of receipt and signature.

NOTE: The transporter must retain a copy of this form.

Disposal Site Section (Items 12 & 13)

12. The authorized representative of the WDS must note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided. A site that converts asbestos-containing waste material to nonasbestos material is considered a WDS.
13. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in Item 12. The date is the date of signature and receipt of shipment.

NOTE: The WDS must retain a completed copy of this form. The WDS must also send a completed copy to the operator listed in Item 2.

[49 FR 13661, Apr. 5, 1984. Redesignated and amended at 55 FR 48424, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991]

NOTE: information in Item 8 (a,b,c,d) provided to Arizona DEQ NESHAP Coordinator by Federal Department of Transportation, Phoenix, Arizona, in 1996 and is added for guidance.

SECTION 61.153

REPORTING

- (a) Any new source to which this subpart applies (with the exception of sources subject to §§61.143, 61.145, 61.146, and 61.148), which has an initial startup date preceding the effective date of this revision, shall provide the following information to the Administrator postmarked or delivered within 90 days of the effective date. In the case of a **new source that does not have an initial startup date preceding the effective date**, the information shall be provided, postmarked or delivered, within 90 days of the initial startup date. Any owner or operator of an existing source shall provide the following information to the Administrator (Note: U.S. EPA Region IX Asbestos NESHAP Coordinator and Arizona DEQ NESHAP Coordinator) within 90 days of the effective date of this subpart unless the owner or operator of the existing source has previously provided this information to the Administrator. **Any changes in the information provided by any existing source shall be provided to the Administrator, postmarked or delivered, within 30 days after the change...**
- (5) For sources subject to §§61.151 and 61.154 (Note: **Inactive Waste Disposal Sites and Active Waste Disposal Sites**):
- (i) A brief description of the site; and
 - (ii) The method or methods used to comply with the standard, or alternative procedures to be used.
- (b) The information required by paragraph (a) of this section must accompany the information required by §61.10. **Active waste disposal sites subject to §61.154 shall also comply with this provision.** Roadways, demolition and renovation, spraying, and insulating materials are exempted from the requirements of §61.10(a). The information described in this section **must be reported using the format of Appendix A** of this part as a guide.

(Approved by the Office of Management and Budget under control number 2000-0264)
(Sec. 114, Clean Air Act as amended (42 U.S.C. 7414))
(49 FR 13661, Apr. 5, 1984. Redesignated and amended at 55 FR 48430, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991)

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PART 61, APPENDIX A
REPORTING FORMAT FOR WASTE DISPOSAL SITE

A. SOURCE INFORMATION

1. **Identification/Location** - Indicate the name and address of source:

Source Name: _____

Street Address (Location): _____

City Name/State/Zip Code: _____

State Registration Number: _____ SIC _____

2. **Contact** - Indicate the name and telephone number of the owner or operator or other responsible official whom EPA may contact concerning this report.

Name: _____

Telephone Number: _____

3. **Source Description** - Briefly state the nature of the source (e.g., Waste Disposal Site)

Description: _____

4. **Alternative Mailing Address** - Indicate an alternative mailing address if correspondence is to be directed to a location different than that specified above.

Street or Box Number: _____

City/State/Zip Code: _____

5. **Compliance Status** - The emissions from this source ___ can ___ cannot meet the emission limitations contained in the National Emission Standards on or prior to 90 days after the effective date of any standards or amendments which require the submission of such information.

Signature of Owner, Operator or Other Responsible Official

Date

Note: If the emissions from the source will exceed those limits set by the National Emission Standards for Hazardous Air Pollutants, the source will be in violation and subject to Federal enforcement actions unless granted a waiver of compliance by the Administrator of U.S. EPA.

ASBESTOS WASTE DISPOSAL SITE

1. **Description** - Provide a brief description of the site, including its size and configuration, and the distance to the closest city or town, closest residence, and closest primary road.

DISTANCE TO:

TOWN: _____ KILOMETERS

RESIDENCE: _____ KILOMETERS

PRIMARY ROAD: _____ KILOMETERS

2. **Inactivation** - After the site is inactivated, indicate the method or methods used to comply with the standard and send a list of the actions that will be undertaken to maintain the inactivated site.

COMPLIANCE METHOD/INACTIVE SITE:

Regional Offices to Submit Report to:

U.S. EPA Region IX
NESHAP Coordinator
Attn: Bob Trotter (A-3-3)
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3989

Arizona DEQ/AQD
NESHAP Coordinator
Attn: Tracy K. Neal
1110 West Washington Street
Phoenix, AZ 85007
(602) 771-2333

SECTION 61.156

CROSS - REFERENCE TO OTHER ASBESTOS REGULATIONS

In addition to this subpart, the regulations referenced in Table 1 also apply to asbestos and may be applicable to those sources specified in 61.142 through 61.151, 61.154, and 61.155 of this subpart. These cross-reference are presented for the reader's information and to promote compliance with the cited regulations.

TABLE 1 - CROSS-REFERENCE TO OTHER ASBESTOS REGULATIONS

Agency	CFR Citation	Comment
EPA	40 CFR part 763, subpart E	Requires schools to inspect for asbestos and implement response actions and submit asbestos management plans to States. Specifies use of accredited inspectors, air sampling methods, and waste disposal procedures.
	40 CFR part 427	Effluent standards for asbestos manufacturing source categories.
	40 CFR part 763, subpart G	Protects public employees performing asbestos abatement work in States not covered by OSHA asbestos abatement.
OSHA	29 CFR 1910.1001	Worker protection measures - engineering controls, worker training, labeling, respiratory protection, bagging of waste, 0.2 f/cc permissible exposure level.
	29 CFR 1926.58	Worker protection measures for all construction work involving asbestos, including demolition and renovation - work practices, worker training, bagging of waste, 0.2 f/cc permissible exposure level.
MSHA	30 CFR part 56, subpart D	Specifies exposure limits, engineering controls, and respiratory protection measures for worker in surface mines.
	30 CFR part 57, subpart D	Specifies exposure limits, engineering controls, and respiratory protection measures for workers in underground mines.
DOT	49 CFR parts 171 and 172	Regulates the transportation of asbestos-containing waste material. Requires waste containment and shipping papers.

[55 FR 48432, Nov. 20, 1990, as amended at 60 FR 31920, June 19, 1995]

EPA - Environmental Protection Agency
OSHA - Occupational Safety and Health Administration
MSHA - Mine Safety and Health Administration
DOT - Department of Transportation

SECTION 61.157

DELEGATION OF AUTHORITY

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) **Authorities that will not be delegated to States:**

- (1) Section 61.149(c)(2)
- (2) Section 61.150 (a)(4)
- (3) Section 61.151(c)
- (4) Section 61.152(b)(3)
- (5) Section 61.154(d)
- (6) Section 61.155(a).

[55 FR 48433, Nov. 20, 1990]

SECTION 61.154

STANDARD FOR ACTIVE WASTE DISPOSAL SITES

Each owner or operator of an active waste disposal site that receives asbestos-containing waste material from a source covered under §§61.149, 61.150, or 61.155 shall meet the requirements of this section:

- (a) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraph (c) or (d) of this section must be met.
- (b) Unless a **natural barrier** adequately deters access by the general public, **either warning signs and fencing** must be installed and maintained as follows, or the requirements of paragraph (c)(1) of this section must be met.
 - (1) **Warning signs** must be displayed at **all entrances** and at intervals of 100 m (330 ft) or less **along the property line** of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:
 - (i) Be posted in such a manner and location that a **person can easily read** the legend; and
 - (ii) Conform to the requirements of 51 cm x 36 cm (20" x 14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and
 - (iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif, Gothic or Block.
Do Not Create Dust	1.9 cm (3/4 inch) Sans Serif, Gothic or Block.
Breathing Asbestos is Hazardous to Your Health	14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

SECTION 61.154 - Continued

- (2) The **perimeter of the disposal site** must be **fenced** in a manner adequate to **deter access by the general public**.
- (3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.
- (c) Rather than meet the no visible emission requirement of paragraph (a) of this section, **at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation**, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:
 - (1) **Be covered** with at least 15 centimeters (6 inches) of **compacted** nonasbestos-containing material, or
 - (2) Be covered with a resinous or petroleum-based **dust suppression agent** that effectively binds dust and controls **wind erosion**. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.
- (d) Rather than meet the no visible emission requirement of paragraph (a) of this section, use an alternative emissions control method that has received prior written approval by the Administrator according to the procedures described in §61.149(c)(2).
- (e) For all asbestos-containing waste material **received**, the owner or operator of the active waste disposal site shall:
 - (1) **Maintain waste shipment records**, using a form similar to that shown in Figure 4, and include the following information:
 - (i) The name, address, and telephone number of the waste generator.
 - (ii) The name, address, and telephone number of the transporter(s).
 - (iii) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).
 - (iv) The **presence of improperly enclosed or uncovered waste**, or any asbestos-containing waste material **not sealed in leak-tight containers**. Report in writing to the local, State, or EPA Regional office responsible for **administering the asbestos NESHAP program** for the waste generator (identified in the waste shipment record),

SECTION 61.154 - Continued

and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.

- (v) The date of the receipt.
- (2) As soon as possible and **no longer than 30 days after receipt of the waste**, send a copy of the signed waste shipment record to the waste generator.
- (3) Upon discovering a **discrepancy** between the **quantity** of waste designated on the waste shipment records and the **quantity actually received**, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is **not resolved within 15 days after receiving the waste**, immediately **report in writing** to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, **if different**, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and **submit a copy** of the waste shipment record along with the report.
- (4) **Retain a copy of all records and reports** required by this paragraph for at least 2 years.
- (f) Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.
- (g) Upon closure, comply with all the provisions of §61.151.
- (h) Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.
- (i) **Furnish upon request**, and make available during normal business hours for inspection by the Administrator, **all records required under this section**.
- (j) Notify the Administrator in writing at least **45 days** prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site **and is covered**. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

SECTION 61.154 - Continued

- (1) Scheduled starting and completion dates.
- (2) Reason for disturbing the waste.
- (3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.
- (4) Location of any temporary storage site and the final disposal site.

SECTION 61.151

STANDARD FOR INACTIVE WASTE DISPOSAL SITES FOR ASBESTOS MILLS AND MANUFACTURING AND FABRICATING OPERATIONS

Each owner or operator of any inactive waste disposal site that was operated by sources covered under §§61.142, 61.144, or 61.147 and received deposits of asbestos-containing waste material generated by the sources, shall:

(a) Comply with one of the following:

- (1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph; or
- (2) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material. In desert areas where vegetation would be difficult to maintain, at least 8 additional centimeters (3 inches) of well-graded, nonasbestos crushed rock may be placed on top of the final cover instead of vegetation and maintained to prevent emissions; or
- (3) Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted nonasbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste; or
- (4) For inactive waste disposal sites for asbestos tailings, a resinous or petroleum-based dust suppression agent that effectively binds dust to control surface air emissions may be used instead of the methods in paragraphs (a)(1), (2), and (3) of this section. Use the agent in the manner and frequency recommended for the particular asbestos tailings by the manufacturer of the dust suppression agent to achieve and maintain dust control. Obtain prior written approval of the Administrator to use other equally effective dust suppression agents. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

(b) Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with paragraph (a)(2) or (a)(3) of this section.

- (1) Display warning signs at all entrances and at intervals of 100 m (328 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited. The warning signs must:

SECTION 61.151 - Continued

- (i) Be posted in such a manner and location that a person can easily read the legend;
and
- (ii) Conform to the requirements of 51 cm x 36 cm (20" x 14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and
- (iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site	2.5-cm (1 inch) Sans Serif, Gothic or Block.
Do Not Create Dust	1.9 cm (3/4 inch) Sans Serif, Gothic or Block.
Breathing Asbestos is Hazardous to Your Health.	14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

- (2) **Fence the perimeter of the site in a manner adequate to deter access by the general public.**
- (3) When requesting a determination on whether a natural barrier adequately deters public access, supply information enabling the Administrator to determine whether a fence or a natural barrier adequately deters access by the general public.
- (c) The owner or operator may use an alternative control method that has received prior approval of the Administrator rather than comply with the requirements of paragraph (a) or (b) of this section.
- (d) **Notify the Administrator in writing at least 45 days prior to excavating** or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site under this section, and follow the procedures specified in the notification. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must

SECTION 61.151 - Continued

be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. **Include** the following information in the notice:

- (1) **Scheduled starting and completion dates.**
 - (2) **Reason for disturbing the waste.**
 - (3) **Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material.** If deemed necessary, the Administrator may require changes in the emission control procedures to be used.
 - (4) **Location of any temporary storage site and the final disposal site.**
- (e) **Within 60 days of a site becoming inactive and after the effective date of this subpart, record, in accordance with State law, a notation on the deed to the facility property and on any other instrument that would normally be examined during a title search; this notation will in perpetuity notify any potential purchaser of the property that:**
- (1) **The land has been used for the disposal of asbestos-containing waste material;**
 - (2) **The survey plot and record of the location and quantity of asbestos-containing waste disposed of within the disposal site required in §61.154(f) have been filed with the Administrator; and**
 - (3) **The site is subject to 40 CFR part 61, subpart M.**

[49 FR 13661, Apr. 5, 1984, as amended at 53 FR 36972, Sept. 23, 1988. Redesignated and amended at 55 FR 48429, Nov. 20, 1990]

APPENDIX A
40 CFR PART 61, SUBPART M

FINAL INTERPRETIVE RULE
GOVERNING ROOF REMOVAL OPERATIONS

I. Applicability of the Asbestos NESHAP

1.1. Asbestos-containing material (ACM) is material containing more than one percent asbestos as determined using the methods specified in appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy. The NESHAP classifies ACM as either "friable" or "nonfriable." Friable ACM is ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Nonfriable ACM is ACM that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

1.2. Nonfriable ACM is further classified as either Category I ACM or Category II ACM. Category I ACM and Category II ACM are distinguished from each other by their potential to release fibers when damaged. Category I ACM includes asbestos-containing gaskets, packings, resilient floor coverings, resilient floor covering mastic, and asphalt roofing products containing more than one percent asbestos. ACM roofing products that use other bituminous binders (such as coal tars or pitches) are also considered to be Category I ACM. Category II ACM includes all other nonfriable ACM, for example, asbestos-cement (A/C) shingles containing more than one percent asbestos. Generally speaking, Category II ACM is more likely to become friable when damaged than is Category I ACM. The applicability of the NESHAP to Category I and II ACM depends on: (1) the condition of the material at the time of demolition or renovation, (2) the nature of the operation to which the material will be subjected, (3) the amount of ACM involved.

1.3. Asbestos-containing material regulated under the NESHAP is referred to as "regulated asbestos-containing material" (RACM). RACM is defined in Section 61.141 of the NESHAP and includes: (1) friable asbestos-containing material; (2) Category I nonfriable ACM that has become friable; (3) Category I nonfriable ACM that has been or will be sanded, ground, cut, or abraded; or (4) Category II nonfriable ACM that has already been or is likely to become crumbled, pulverized, or reduced to powder. If the coverage threshold for RACM is met or exceeded in a renovation or demolition operation, then all friable ACM in the operation, and in certain situations, nonfriable ACM in the operation, are subject to the NESHAP.

ADEQ: 10/26/94

A. Threshold Amounts of Asbestos-Containing Roofing Material

1.A.1. The NESHAP does not cover roofing projects on single family homes or on residential buildings containing four or fewer dwelling units. (40 CFR Section 61.141) For other roofing renovation projects, if the total asbestos-containing roof area undergoing renovation is less than 160 sq. ft, the NESHAP does not apply, regardless of the removal method to be used, the type of material (Category I or II), or its condition (friable versus nonfriable). (40 CFR Section 61.145(a)(4)) However, EPA would recommend the use of methods that damage the roofing material as little as possible. EPA has determined that where a rotating blade (RB) roof cutter or similar equipment is used to remove asbestos-containing bituminous roofing material, the removal of 5580 sq. ft. of that material will create 160 sq. ft. of RACM. Therefore, it is EPA's interpretation that when an RB roof cutter or similar equipment is used to remove asbestos-containing bituminous roofing material, any project that is 5580 sq. ft. or greater is subject to the NESHAP; conversely, it is EPA's interpretation that when an RB roof cutter or similar equipment is used to remove asbestos-containing bituminous roofing material in a roof removal project that is less than 5580 sq. ft., the project is not subject to the NESHAP, except that notification is always required for demolitions. EPA further construes the NESHAP to mean that if slicing or other methods that do not sand, grind, cut or abrade will be used on Category I nonfriable ACM, the NESHAP does not apply, regardless of the area of roof to be removed.

1.A.2. For asbestos cement (A/C) shingles (or other Category II roofing material), if the area of the roof to be removed is at least 160 sq. ft. and the removal methods will result in the material being crumbled, pulverized, or reduced to powder, the removal is subject to the NESHAP; conversely, if the area of the roof to be removed is less than 160 sq. ft., the removal is not subject to the NESHAP regardless of the removal method used, except that notification is always required for demolitions. (40 CFR Section 61.145(a)) However, EPA would recommend the use of methods that damage the roofing material as little as possible. If the material is removed without the material being crumbled, pulverized or reduced to powder, the operation is not subject to the NESHAP, even where the affected area exceeds 160 sq. ft. See the definition of regulated asbestos-containing material (RACM), 40 CFR Section 61.141.

1.A.3. Only roofing material that meets the definition of ACM can qualify as RACM subject to the NESHAP. Therefore, to determine if a removal operation that meets or exceeds the coverage threshold is subject to the NESHAP, any suspect roofing material (i.e. roofing material that may be ACM) should be tested for asbestos. If any such roofing material contains more than one percent asbestos and if the removal operation is covered by the NESHAP, then EPA must be notified and the work practices in Section

61.145(c) must be followed. In EPA's view, if a removal operation involves at least the threshold level of suspect material, a roofing contractor may choose not to test for asbestos if the contractor follows the notification and work practice requirements of the NESHAP.

B. A/C Shingle Removal (Category II ACM Removal)

1.B.1. A/C shingles, which are Category II nonfriable ACM, become regulated ACM if the material has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations. (40 CFR Section 61.141) However, merely breaking an A/C shingle (or any other Category II ACM) that is not friable may not necessarily cause the material to become RACM. A/C shingles are typically nailed to buildings on which they are attached. EPA believes that the extent of breakage that will normally result from carefully removing A/C shingles and lowering the shingles to the ground will not result in crumbling, pulverizing or reducing the shingles to powder. Conversely, the extent of breakage that will normally occur if the A/C shingles are dropped from a building or scraped off of a building with heavy machinery would cause the shingles to become RACM. EPA therefore construes the NESHAP to mean that the removal of A/C shingles that are not friable, using methods that do not crumble, pulverize, or reduce the A/C shingles to powder (such as pry bars, spud bars and shovels to carefully pry the material), is not subject to the NESHAP provided that the A/C shingles are properly handled during and after removal, as discussed in this paragraph and the asbestos NESHAP. This interpretation also applies to other Category II nonfriable asbestos-containing roofing materials.

C. Cutting vs. Slicing and Manual Methods for Removal of Category I ACM

1.C.1. Because of damage to the roofing material, and the potential for fiber release, roof removal operations using rotating blade (RB) roof cutters or other equipment that sand, grind, cut or abrade the roof material are subject to the NESHAP. As EPA interprets the NESHAP, the use of certain manual methods (using equipment such as axes, hatchets, or knives, spud bars, pry bars, and shovels, but not saws) or methods that slice, shear, or punch (using equipment such as a power slicer or power plow) does not constitute "cutting or abrading." This is because these methods do not destroy the structural matrix or integrity of the material such that the material is crumbled, pulverized or reduced to powder. Hence, it is EPA's interpretation that when such methods are used, assuming the roof material is not friable, the removal operation is not subject to the regulation.

1.C.2. Power removers or power tear-off machines are typically used to pry the roofing material up from the deck after the roof membrane has been cut. It is EPA's interpretation that when these machines are used to pry roofing material up, their use is not regulated by the NESHAP.

1.C.3. As noted previously, the NESHAP only applies to the removal of asbestos-containing roofing materials. Thus, the NESHAP does not apply to the use of RB cutters to remove non-asbestos built up roofing (BUR). On roofs containing some asbestos-containing and some non-asbestos containing materials, coverage under the NESHAP depends on the methods used to remove each type of material in addition to other coverage thresholds specified above. For example, it is not uncommon for existing roofs to be made of non-asbestos BUR and base flashings that do contain asbestos. In that situation, EPA construes the NESHAP to be inapplicable to the removal of the non-asbestos BUR using an RB cutter so long as the RB cutter is not used to cut 5580 sq. ft. or more of the asbestos-containing base flashing or other asbestos-containing material into sections. In addition, the use of methods that slice, shear, punch or pry could then be used to remove the asbestos flashings and not trigger coverage under the NESHAP.

II. Notification

2.1. Notification for a demolition is always required under the NESHAP. However, EPA believes that few roof removal jobs constitute "demolitions" as defined in the NESHAP (Section 61.141). In particular, it is EPA's view that the removal of roofing systems (i.e., the roof membrane, insulation, surfacing, coatings, flashings, mastic, shingles, and felt underlayment), when such removal is not a part of a demolition project, constitutes a "renovation" under the NESHAP. If the operation is a renovation, and Category I roofing material is being removed using either manual methods or slicing, notification is not required by the NESHAP. If Category II material is not friable and will be removed without crumbling, pulverizing, or reducing it to powder, no notification is required. Also, if the renovation involves less than the threshold area for applicability as discussed above, then no notification is required. However, if a roof removal meets the applicability and threshold requirements under the NESHAP, then EPA (or the delegated agency) must be notified in advance of the removal in accordance with the requirements of Section 61.145(b), as follows:

- * Notification must be given in writing at least 10 working days in advance and must include the information in Section 61.145(b) (4), except for emergency renovations as discussed below.

- * The notice must be updated as necessary, including, for example, when the amount of asbestos-containing roofing material reported changes by 20 percent or more.

* EPA must be notified if the start date of the roof removal changes. If the start date of a roof removal project is changed to an earlier date, EPA must be provided with a written notice of the new start date at least 10 working days in advance. If the start date changes to a later date, EPA must be notified by telephone as soon as possible before the original start date and a written notice must be sent as soon as possible.

* For emergency renovations (as defined in Section 61.141), where work must begin immediately to avoid safety or public health hazards, equipment damage, or unreasonable financial burden, the notification must be postmarked or delivered to EPA as soon as possible, but no later than the following work day.

III. Emission Control Practices

A. Requirements to Adequately Wet and Discharge No Visible Emission

3.A.1. The principal controls contained in the NESHAP for removal operations include requirement that the affected material be adequately wetted, and that asbestos waste be handled, collected, and disposed of properly. The requirements for disposal of waste materials are discussed separately in section III.D. below. The emission control requirements discussed here apply only to roof removal operations that are covered by the NESHAP as set forth in Section I above.

3.A.2. For any operation subject to the NESHAP, the regulation (Sections 61.145(c)(2)(i), (3), (6)(i)) requires that RACM be adequately wet (as defined in Section 61.141) during the operation that damages or disturbs the asbestos material until collected for disposal.

3.A.3. When using an RB roof cutter (or any other method that sands, grinds, cuts or abrades the roofing material) to remove Category I asbestos-containing roofing material, the emission control requirements of Section 61.145(c) apply as discussed in Section I above. EPA will consider a roof removal project to be in compliance with the "adequately wet" and "discharge no visible emission" requirements of the NESHAP if the RB roof cutter is equipped and operated with the following: (1) a blade guard that completely encloses the blade and extends down close to the roof surface; and (2) a device for spraying a fine mist of water inside the blade guard, and which device is in operation during the cutting of the roof.

B. Exemptions from Wetting Requirements

3.B.1. The NESHAP provides that, in certain instances, wetting may not be required during the cutting of Category I asbestos roofing material with an RB roof cutter. If EPA determines in

accordance with Section 61.145(c)(3)(i), that wetting will unavoidably damage the building, equipment inside the building, or will present a safety hazard while stripping the ACM from a facility component that remains in place, the roof removal operation will be exempted from the requirement to wet during cutting. EPA must have sufficient written information on which to base such a decision. Before proceeding with a dry removal, the contractor must have received EPA's written approval. Such exemptions will be made on a case-by-case basis.

3.B.2. It is EPA's view that, in most instances, exemptions from the wetting requirements are not necessary. Where EPA grants an exemption from wetting because of the potential for damage to the building, damage to equipment within the building or a safety hazard, the NESHAP specifies alternative control methods (Section 61.145(c)(3)(i)(B)). Alternative control methods include the use of local exhaust ventilation systems that capture the dust, and do not produce visible emissions, or methods that are designed and operated in accordance with the requirements of Section 61.152, or other methods that have received the written approval of EPA. EPA will consider an alternative emission control method in compliance with the NESHAP if the method has received written approval from EPA and the method is being implemented consistent with the approved procedures (Section 61.145(c)(3)(ii) or Section 61.152(b)(3)).

3.B.3. An exemption from wetting is also allowed when the air or roof surface temperature at the point of wetting is below freezing, as specified in Section 61.145(c)(7). If freezing temperatures are indicated as the reason for not wetting, records must be kept of the temperature at the beginning, middle and end of the day on which wetting is not performed and the records of temperature must be retained for at least 2 years. 40 CFR Section 61.145(c)(7)(iii). It is EPA's interpretation that in such cases, no written application to, or written approval by the Administrator is needed for using emission control methods listed in Section 61.145(c)(3)(i)(B), or alternative emission control methods that have been previously approved by the Administrator. However, such written application or approval is required for alternative emission control methods that have not been previously approved. Any dust and debris collected from cutting must still be kept wet and placed in containers. All of the other requirements for notification and waste disposal would continue to apply as described elsewhere in this notice and the Asbestos NESHAP.

C. Waste Collection and Handling

3.C.1. It is EPA's interpretation that waste resulting from slicing and other methods that do not significantly damage the ACM (for Category I roofing material) is not subject to the NESHAP and can be disposed of as nonasbestos waste. EPA further construes the NESHAP to provide that if Category II roofing material (such as A/C

shingles) are removed and disposed of without crumbling, pulverizing, or reducing it to powder, the waste from the removal is not subject to the NESHAP waste disposal requirements. Of course, other State, local, or Federal regulations may apply.

3.C.2. It is EPA's interpretation that when an RB roof cutter, or other method that similarly damages the roofing material, is used to cut Category I asbestos containing roofing material, the damaged material from the cut (the sawdust or debris) is considered asbestos containing waste subject to Section 61.150 of the NESHAP. This material must be disposed of at a disposal site operated in accordance with the NESHAP. It is also EPA's interpretation of the NESHAP that if the remainder of the roof is free of the sawdust and debris generated by the cutting, or if such sawdust or debris is collected as discussed below in paragraphs 3.C.3, 3.C.4 and 3.C.5, the remainder of the roof can be disposed of as nonasbestos waste because it is considered to be Category I nonfriable material (as long as the remainder of the roof is in fact nonasbestos material or if it is Category I asbestos material and the removal methods do not further sand, grind, cut or abrade the roof material). EPA further believes that if the roof is not cleaned of the sawdust or debris, i.e., it is contaminated, then it must be treated as asbestos-containing waste material and be handled in accordance with Section 61.150.

3.C.3. In order to be in compliance with the NESHAP while using an RB roof cutter (or similar device) to cut Category I asbestos containing roofing material, the dust and debris resulting from the cutting of the roof should be collected as soon as possible after the cutting operation, and kept wet until collected and placed in leak-tight containers. EPA believes that where the blade guard completely encloses the blade and extends down close to the roof surface and is equipped with a device for spraying a fine mist of water inside the blade guard, and the spraying device is in operation during the cutting, most of the dust and debris from cutting will be confined along the cut. The most efficient methods to collect the dust and debris from cutting are to immediately collect or vacuum up the damaged material where it lies along the cut using a filtered vacuum cleaner or debris collector that meets the requirements of 40 CFR Section 61.152 to clean up as much of the debris as possible, or to gently sweep up the bulk of the debris, and then use a filtered vacuum cleaner that meets the requirements of 40 CFR Section 61.152 to clean up as much of the remainder of the debris as possible. On smooth surfaced roofs (nonaggregate roofs), sweeping up the debris and then wet wiping the surface may be done in place of using a filtered vacuum cleaner. It is EPA's view that if these decontamination procedures are followed, the remaining roofing material does not have to be collected and disposed of as asbestos waste. Additionally, it is EPA's view that where such decontamination procedures are followed, if the remaining portions of the roof are non-asbestos or Category I nonfriable asbestos material, and if the remaining portions are

removed using removal methods that slice, shear, punch or pry, as discussed in section 1.C above, then the remaining portions do not have to be collected and disposed of as asbestos waste and the NESHAP's no visible emissions requirements are not applicable to the removal of the remaining portions. Other methods of decontamination may not be adequate, and should be approved by the local delegated agency.

3.C.4. In EPA's interpretation, if the debris from the cutting is not collected immediately, it will be necessary to lightly mist the dust or debris, until it is collected, as discussed above, and placed in containers. The dust or debris should be lightly misted frequently enough to prevent the material from drying, and to prevent airborne emissions, prior to collection as described above. It is EPA's interpretation of the NESHAP that if these procedures are followed, the remaining roofing material does not have to be collected and disposed of as asbestos waste, as long as the remaining roof material is in fact nonasbestos material or if it is Category I asbestos material and the removal methods do not further sand, grind, cut or abrade the roof material.

3.C.5. It is EPA's interpretation that, provided the roofing material is not friable prior to the cutting operation, and provided the roofing material has not been made friable by the cutting operation, the appearance of rough, jagged or damaged edges on the remaining roofing material, due to the use of an RB roof cutter, does not require that such remaining roofing material be handled and disposed of as asbestos waste. In addition, it is also EPA's interpretation that if the sawdust or debris generated by the use of an RB roof cutter has been collected as discussed in paragraphs 3.C.3, 3.C.4 and 3.C.6, the presence of dust along the edge of the remaining roof material does not render such material "friable" for purposes of this interpretive rule or the NESHAP, provided the roofing material is not friable prior to the cutting operation, and provided that the remaining roofing material near the cutline has been made friable by the use of the RB cutter (i.e. where such remaining roofing material near the cutline can be crumbled, pulverized or reduced to powder using hand pressure), it is EPA's interpretation that the use of an encapsulant will ensure that such friable material need not be treated or disposed of as asbestos containing waste material. The encapsulant may be applied to the friable material after the roofing material has been collected into stacks for subsequent disposal as nonasbestos waste. It is EPA's view that if the encapsulation procedure set forth in this paragraph is followed in operations where roofing material near the cutline has been rendered friable by the use of an RB roof cutter, and if the decontamination procedures set forth in paragraph 3.C.3 have been followed, the NESHAP's no visible emissions and adequately wet requirements would be met for the removal, handling and disposal of the remaining roofing material.

3.C.6. As one way to comply with the NESHAP, the dust and debris from cutting can be placed in leak-tight containers, such as plastic bags, and the containers labeled using warning labels required by OSHA (29 CFR 1926.58). In addition, the containers must have labels that identify the waste generator (such as the name of the roofing contractor, abatement contractor, and/or building owner or operator) and the location of the site at which the waste was generated.

IV. Waste Disposal

A. Disposal Requirements

4.A.1. Section 61.150(b) requires that, as soon as is practical, all collected dust and debris from cutting as well as any contaminated roofing squares, must be taken to a landfill that is operated in accordance with Section 61.154 or to an EPA-approved site that converts asbestos waste to nonasbestos material in accordance with Section 61.155. During the loading and unloading of affected waste, asbestos warning signs must be affixed to the vehicles.

B. Waste Shipment Record

4.B.1. For each load of asbestos waste that is regulated under the NESHAP, a waste shipment record (WSR) must be maintained in accordance with Section 61.150(d). Information that must be maintained for each waste load includes the following:

- * Name, address, and telephone number of the waste generator.
- * Name and address of the local, State, or EPA regional office responsible for administering the asbestos NESHAP program.
- * Quantity of waste in cubic meters (or cubic yards).
- * Name and telephone number of the disposal site operator.
- * Name and physical site location of the disposal site.
- * Date transported.
- * Name, address, and telephone number of the transporter(s).
- * Certification that the contents meet all government regulations for transport by highways.

4.B.2. The waste generator is responsible for ensuring that a copy of the WSR is delivered to the disposal site along with the waste shipment. If a copy of the WSR signed by the disposal site operator is not returned to the waste generator within 35 days, the waste generator must contact the transporter and/or the disposal

site to determine the status of the waste shipment. 40 CFR Section 61.150(d)(3). If the signed WSR is not received within 45 days, the waste generator must report, in writing, to the responsible NESHAP program agency and send along a copy of the WSR. 40 CFR Section 61.150(d)(4). Copies of WSRs, including those signed by the disposal site operator, must be retained for at least 2 years. (40 CFR Section 61.150(d)(5)).

V. Training

5.1. For those roof removals that are subject to the NESHAP, at least one on-site supervisor trained in the provisions of the NESHAP must be present during the removal of the asbestos roofing material. (40 CFR Section 61.145(c)(8)). In EPA's view, this person can be a job foreman, a hired consultant, or someone who can represent the building owner or contractor responsible for the removal. Asbestos training courses developed for other purposes can satisfy this requirement of the NESHAP, as long as the course covers the areas specified in the regulation. EPA believes that Asbestos Hazard Emergency Response Act (AHERA) training courses will, for example, satisfy the NESHAP training requirements. In addition to the initial training requirement, a refresher training course is required every 2 years. The NESHAP training requirements became effective on November 20, 1991.

5.2. Asbestos training courses developed specifically to address compliance with the NESHAP in roofing work, as well as courses developed for other purposes can satisfy this requirement of the NESHAP, as long as the course covers the areas specified in the regulation. EPA believes that Asbestos Hazard Emergency Response Act (AHERA) training courses will, for example, satisfy the NESHAP training requirements. However, nothing in this interpretive rule or in the NESHAP shall be deemed to require that roofing contractors or roofing workers performing operations covered by the NESHAP must be trained or accredited under AHERA, as amended by the Asbestos School Hazard Abatement Reauthorization Act (ASHARA). Likewise, state or local authorities may independently impose additional training, licensing, or accreditation requirements on roofing contractors performing operations covered by the NESHAP, but such additional training, licensing or accreditation is not called for by this interpretive rule or the federal NESHAP.

5.3. For removal of Category I asbestos containing roofing material where RB roof cutters or equipment that similarly damages the asbestos-containing roofing material are used, the NESHAP training requirements (Section 61.145(c)(8)) apply as discussed in Section I above. It is EPA's intention that removal of Category I asbestos-containing roofing material using hatchets, axes, knives, and/or the use of spud bars, pry bars and shovels to lift the roofing material, or similar removal methods that slice, punch, or

shear the roof membrane are not subject to the training requirements, since these methods do not cause the roof removal to be subject to the NESHAP. Likewise, it is EPA's intention that roof removal operations involving Category II nonfriable ACM are not subject to the training requirements where such operations are not subject to the NESHAP as discussed in section I above.

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NOTE: Items in bold were added to the final Interpretive Rule Governing Roof Removal Operations as published in the Federal Register of June 17, 1994.